

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method for processing video images to detect an event of interest, comprising the steps of:

receiving a video signal representing the video images to be processed;

extracting at least one point feature from the video signal;

tracking the position and movement of the at least one point feature within the video images to generate a corresponding at least one track, each of said at least one track representing a corresponding point feature;

using an iterative learning process to derive a normal pattern of behavior for each track;

comparing present behavior of the at least one track to the respective normal pattern of behavior; and

in response to the present behavior falling outside the normal pattern of behavior, generating an alarm signal.

Claim 2. (Currently Amended) [[A]] The method according to claim 1, wherein the alarm signal causes at least one of the following effects:

draw the attention of an operator;

place an index mark at the appropriate place in recorded video data;
and

trigger selective recording of video data.

Claim 3. (Currently Amended) [[A]] The method according to claim 1 wherein the learning process accumulates data representing the behavior of the track(s) over a period of time in a four-dimensional histogram, said four dimensions representing x-position, y-position, x-velocity and y-velocity, of the track(s) within the video image.

Claim 4. (Currently Amended) [[A]] The method according to claim 3, wherein:

the learn behavior stage segregates the tracks according to a velocity threshold; ~~wherein~~

tracks moving at a velocity below the velocity threshold are considered stationary while tracks moving at a velocity in excess of the velocity threshold are considered mobile; ~~wherein~~

data concerning the mobile tracks is stored in said four-dimensional histogram; and [[,]]

data concerning the stationary tracks ~~being~~ is stored in a two-dimension histogram, ~~said two dimensions~~ representing x-position and y-position within the video image.

Claim 5. (Currently Amended) [[A]] The method according to claim 3, wherein a cell size of the four-dimensional histogram varies in accordance with a measured speed in the image of each respective track.

Claim 6. (Currently Amended) [[A]] The method according to claim 3, wherein the histogram is periodically de-weighted in order to bias the result of the learning process towards more recent events.

Claim 7. (Currently Amended) [[A]] The method according to claim 1, wherein the comparison process classifies a track according to a comparison of the frequency of occupation of [[the]] a corresponding histogram cell with an occupancy threshold.

Claim 8. (Currently Amended) [[A]] The method according to claim 7 wherein the comparison process acts to classify as normal behavior a track adjacent or near a cell which is above the occupancy threshold, despite the track appearing in a cell below the occupancy threshold, where one cell is considered to be near another if the distance between them [[s]] is below a predetermined distance threshold.

Claim 9. (Currently Amended) [[A]] The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response to an abnormal track which resembles a number of other abnormal tracks, in terms of at least one of position, velocity and time.

Claim 10. (Currently Amended) [[A]] The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to an abnormal track which has been classified as abnormal on a predetermined number of occasions.

Claim 11. (Currently Amended) [[A]] The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to a track being classified as abnormal for the first time.

Claim 12. (Currently Amended) [[A]] The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated only in response to a filtered version of [[the]] a classification rising above a predetermined threshold value.

Claim 13. (Currently Amended) [[A]] The method according to claim 1, wherein subsequent active alarm signals are inhibited for a predetermined time interval after a first active alarm signal has been produced.

Claim 14. (Currently Amended) [[A]] The method according to claim 1, wherein subsequent active alarm signals are inhibited if caused by an abnormal track within a predetermined distance of another track which has previously generated an alarm.

Claim 15. (Currently Amended) Apparatus for processing video images to detect an event of interest, comprising:

a source of video images, ~~producing~~ which produces a video signal representing the video images to be processed;

a feature extraction device ~~receiving~~ that receives the video signal, and ~~producing~~ produces data representing at least one point feature detected within the image;

a feature tracking device ~~receiving~~ that receives the data representing said at least one point features feature, and ~~producing~~ produces data representing a track that is tracks, ~~being~~ representative of ~~[[the]]~~ position and speed of each respective of said at least one point feature ~~[[,]]~~ within the image;

a learning device ~~receiving~~ that receives the data representing ~~[[the]]~~ tracks of said at least one point feature, and ~~producing~~ produces a signal representing a range of behavior considered normal by the learning device, in response to operation of a learning process on the data representing the tracks;

a classification device ~~receiving~~ that receives both the signal representing the normal range of behavior of the tracks and the data representing the tracks, and is ~~being~~ adapted to compare the signal and the data

and to issue a normal/abnormal signal in accordance with the outcome of such comparison; and

an alarm generation device ~~receiving~~ that receives the normal/abnormal signal and ~~generating~~ generates at least one active alarm signal in response to the normal/abnormal signal indicating abnormal behavior of at least one track.

Claims 16.-17. (Cancelled)